



E1675  
JACC April 5, 2011  
Volume 57, Issue 14



## A RANDOMIZED STUDY OF TRANSRADIAL VERSUS TRANSULNAR ARTERY APPROACH FOR CORONARY INTERVENTIONS

i2 Oral Contributions

Ernest N. Morial Convention Center, Room 353

Tuesday, April 05, 2011, 9:10 a.m.-9:24 a.m.

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Session Title: Vascular Access

Abstract Category: 24. Vascular Access, Closure Devices and Complications

Presentation Number: 2910-10

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**Background:** Although the transradial (TR) approach is being increasingly accepted, the transulnar (TU) access for coronary interventions is rarely used. In this prospective, randomized trial, we compared the 2 forearm arteries in consecutive patients undergoing coronary angiography with or without angioplasty (PCI).

**Methods:** Patients were randomized to either TR or TU access regardless of the Allen's test results. Cross over to the ipsilateral other forearm artery was allowed if the chosen approach was unsuccessful and the artery undamaged. Study superiority primary endpoint was vascular success rate free from major vascular and ischemic complications (death, infraction, stroke) at 1 month follow-up.

**Results:** From July to October 2010, we randomized 126 patients (males: 68%; mean age: 63 +/- 12 years; 41% with acute coronary syndrome) for coronary angiography followed or not by PCI, to either TR (51 patients, 40%) or TU access. Baseline and demographic characteristics, vessel distribution and % of PCIs did not differ between the 2 groups. The primary endpoint was met in 94.1%% by the TR and 61.3%% by the TU approach ( $P<0.001$ ), due to much higher arterial cannulation success rate in the TR vs. TU group: 97% vs. 66%, respectively (intention-to-treat;  $p<0.001$ ). Two patients with TR and one with TU access failure were crossed-over to the ipsilateral other forearm artery. All procedures were successfully completed once the artery was cannulated. Number of attempted arterial punctures (1,63 +/- 0,5 vs. 4,52 +/- 3,1), radiation exposure (6'53" +/- 5'28" vs. 12'06" +/- 8'52") and total procedure duration (20'15" +/- 15'40" vs 30'38" +/- 27'07") , favored the TR group ( $P<0.001$ ). Parameters of patients' discomfort, hemodynamics, catheters and volume of contrast agent used were similar between the two groups. One patient of each group developed periprocedural myocardial enzyme elevation. Cross-over rate for transfemoral catheterization was 1%.

**Conclusion:** Due to higher successful access rate, the TR was superior to the TU approach.